

CLAIMS

Claims 1-35 (canceled)

Claim 36 (currently amended): A method of repairing a diseased or injured tissue in a patient, comprising the steps of surgically obtaining a healthy chondrocyte specimen from a ~~different part of the~~ non-diseased or injured part of a patient's body, rapidly growing high-quality chondrocytes externally of the patient's body in ~~spin-culture~~ spinner culture on microcarrier particles, and surgically implanting the rapidly grown high-quality chondrocytes ~~into the~~ into diseased or injured tissue of the ~~patient;~~ patient's body, such that the high-quality chondrocytes regenerate within the patient's body, thereby producing a long-term cure of the patient's diseased or injured tissue.

Claim 37 (currently amended): The method of claim 36, wherein the healthy chondrocyte specimen is ~~conveniently~~ taken from the patient's nasal septal cartilage.

Claim 38 (original): The method of claim 36, wherein the rapidly grown high-quality chondrocytes are implanted for orthopedic purposes.

Claim 39 (original): The method of claim 38, wherein the implantation is in the patient's knee.

Claim 40 (original): The method of claim 36, wherein the high-quality chondrocytes are grown in spin-culture on microcarrier particles in a reduced oxygen environment.

Claim 41 (original): The method of claim 40 in which the low oxygen environment contains about 5% oxygen.

Claim 42 (original): The method of claim 36, wherein the microcarrier particles are composed of a biodegradable and biocompatible material.

Claim 43 (currently amended): The method of claim 42, wherein the biodegradable and biocompatible material is selected from ~~a group consisting of~~ collagen, ~~collagen-coated biopolymers,~~ dextran, N,N-diethylaminoethyl (DEAE)-dextran, or N,N,N-trimethyl-2-hydroxy-aminopropyl-dextran.

Claim 44 (original): The method of claim 42, wherein the biodegradable and biocompatible material is a cross-linked polymer prepared by crosslinking a polysaccharide with a polyamine.

Claim 45 (original): The method of claim 44, wherein the polysaccharide is selected from the group consisting of dextran, arabinogalactan, pollulan, cellulose and amylose.

Claim 46 (original): The method of claim 44, wherein the crosslinking polyamine is selected from a group consisting of lysine, ethylenediamine, alkylenediamine, phenylenediamine, xylenediamine, polyethylenimine, gelatin, albumin and fibrinogen.

Claims 47 - 57 (canceled)

Claim 58 (currently amended): A method of repairing a diseased or injured tissue in a patient, comprising the steps of surgically obtaining a healthy tissue specimen ~~from a different part of the~~ from a patient's body, rapidly growing high-quality cells from the tissue specimen externally of the patient's body in ~~spin-culture~~ spinner culture on microcarrier particles, and surgically implanting the rapidly grown high-quality cells ~~into the~~ into diseased or injured tissue

of the patient, such that the high-quality cells regenerate within the patient's body, thereby producing a long-term cure of the patient's diseased or injured tissue.

Claim 59 (currently amended): The method of claim 58, wherein the healthy tissue specimen is ~~conveniently~~ taken from the patient's bone marrow, periosteum, perichondrium, cartilage, bone, or peripheral blood.

Claim 60 (currently amended): The method of claim 58, wherein the healthy tissue specimen is ~~conveniently~~ taken from the patient's bone marrow.

Claim 61 (original): The method of claim 58, wherein the cells are selected from a group consisting of chondrocytes, osteoblasts, osteocytes, chondrogenic cells, pluripotent cells, progenitor mesenchymal cells, fibroblasts, and mucosal cells.

Claim 62 (original): The method of claim 58, wherein the rapidly grown high-quality cells are implanted for orthopedic purposes.

Claim 63 (original): The method of claim 58, wherein the rapidly grown high-quality cells are implanted for orthopedic purposes.

Claim 64 (currently amended): The method of claim 58, wherein the high-quality cells are grown by ~~spin-culture~~ spinner culture on microcarrier particles in a reduced oxygen environment.

Claim 65 (original): The method of claim 64 in which the low oxygen environment contains about 5% oxygen.

Claim 66 (original): The method of claim 58, wherein the microcarrier particles are composed of a biodegradable and biocompatible material.

Claim 67 (currently amended): The method of claim 66, wherein the biodegradable and biocompatible material is selected from collagen, ~~collagen-coated biopolymers~~, dextran, N,N-diethylaminoethyl(DEAE)-dextran, or N,N,N-trimethyl-2-hydroxy-aminopropyl-dextran.

Claim 68 (original): The method of claim 66, wherein the biodegradable and biocompatible material is a cross-linked polymer prepared by crosslinking a polysaccharide with a polyamine.

Claim 69 (original): The method of claim 68, wherein the polysaccharide is selected from the group consisting of dextran, arabinogalactan, pullulan, cellulose and amylose.

Claim 70 (original): The method of claim 68, wherein the crosslinking polyamine is selected from a group consisting of lysine, ethylenediamine, alkylenediamine, phenylenediamine, xylenediamine, polyethylenimine, gelatin, albumin and fibrinogen.

Claims 71-83 (canceled).